

## **SIEC Briefing Paper a Proposed Risk and Severity Matrix for Projects**

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### **Description**

The SIEC has overarching responsibility with regard to frequency management, and the acquisition and disposition of equipment. The SIEC may delegate a portion of its responsibility to other agencies and institutions of state government under appropriate standards. The Risk and Severity Matrix is a way by which the SIEC may delegate authority to agencies, provided that (1) no additional frequency is being asked for, (2) the state agency has delegated authority as provided by the Information Services Board regulation and (3) that the project that is presented is considered a low risk, and low severity.

**Severity** is rated on four categories: impact on citizens, visibility to the public and Legislature, impact on state operations, and the consequences of doing nothing. The **risk** criteria measure the impact of the project on the organization, the effort needed to complete the project, the stability of the proposed technology, and the agency preparedness.

### **Recommendations to the Committee**

It is the recommendation of the SIEC Advisory Work Group, the SIEC Technical and Frequency Management work group and staff that the recommended Risk and Severity Matrix be used to delegate limited authority to state agencies.

### **Status**

This is new matter for the SIEC. The Information Services Board, the parent committee of the SIEC has long established a similar policy to the one being proposed.

### **Issues**

The SIEC as established in legislation has the responsibility for providing full approval authority over all projects conducted by the state that require either the acquisition or disposition of equipment.

### **Background**

The recommendation above will align the SIEC with the Information Services Board and allow the Committee to focus their attention to more vital matters. The risk and severity matrix has been used by the Information Services Board as a way to determine what Information Technology projects should be monitored by the Board, the ISB Staff, and which projects should be monitored within state agencies. As there are additional variables that need to be considered when looking at radio interoperability, a modified matrix was created.

Although, it is clear that projects that may require additional spectrum may indeed be low risk and severity, the enabling legislation for the SIEC does not permit agencies to obtain such frequencies without the SIEC's express approval. Therefore for the purposes of the SIEC Risk and Severity Matrix, SIEC oversight may apply to some projects where ISB oversight would be absent.

Absent the authority to delegate acquisitions, an agency wishing to purchase one radio would be required to bring this matter before the SIEC for approval. The proposed risk and severity matrix will be used by state agencies to help determine which projects require SIEC approval.

### Severity Level Criteria

The severity matrix assesses the proposed project's impact on citizens and state operations, its visibility to stakeholders, and the consequences of project failure.

Categories				
Levels	Impact on Clients	Visibility	Impact on State Operations	Failure or Nil Consequences
<b>High</b>	<ul style="list-style-type: none"> <li>Direct contact with citizens, political subdivisions, and service providers.</li> </ul>	<ul style="list-style-type: none"> <li>Highly visible to public, trading partners, political subdivisions and Legislature.</li> <li>Likely subject to hearings. System processes sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>Statewide or multiple agency involvement / impact.</li> <li>Initial radio system acquisitions.</li> </ul>	<ul style="list-style-type: none"> <li>Inability to meet legislative mandate or agency mission.</li> <li>Loss of significant federal funding.</li> <li>Imminent failure of aging radio systems.</li> </ul>
<b>Medium</b>	<ul style="list-style-type: none"> <li>Indirect impacts on citizens.</li> </ul>	<ul style="list-style-type: none"> <li>Some visibility to the Legislature, trading partners, or public the system / program supports.</li> <li>May be subject to legislative hearing.</li> </ul>	<ul style="list-style-type: none"> <li>Multiple divisions or programs within agency.</li> </ul>	<ul style="list-style-type: none"> <li>Potential failure of aging systems.</li> </ul>
<b>Low</b>	<ul style="list-style-type: none"> <li>Agency operations only.</li> </ul>	<ul style="list-style-type: none"> <li>Internal agency only.</li> </ul>	<ul style="list-style-type: none"> <li>Single division. Improve or expand existing radio networks with similar technology.</li> </ul>	<ul style="list-style-type: none"> <li>Loss of opportunity for improved service delivery or efficiency.</li> <li>Failure to resolve customer service complaints or requests.</li> </ul>

### Risk Level Criteria

The risk matrix measures the impact of the project on the organization, the effort needed to complete the project, the stability of the proposed technology, and agency preparedness.

Categories				
Levels	Functional Impact on Business Processes or Rules	Development Effort & Resources	Technology	Capability & Management
<b>High</b>	<ul style="list-style-type: none"> <li>Significant change to business rules.</li> <li>Replacement of a mission critical system.</li> <li>Multiple organizations involved.</li> <li>Requires extensive and substantial job training for work groups.</li> </ul>	<ul style="list-style-type: none"> <li>Over \$5 million.</li> <li>Development and implementation exceeds 24 months</li> <li>Requires a second decision package.</li> <li>Requires new radio frequencies<sup>1</sup></li> </ul>	<ul style="list-style-type: none"> <li>Emerging.</li> <li>Unproven.</li> <li>Two or more of the following are new for agency technology staff or integrator, or are new to the agency architecture: programming language; operating systems; development tools; data communications technology.</li> <li>Incompatible technology (wide vs narrow band, trunked vs conventional, or incompatible frequency bands)</li> </ul>	<ul style="list-style-type: none"> <li>Minimal executive sponsorship.</li> <li>Agency uses ad-hoc processes.</li> <li>Agency and/or vendor track record suggests inability to mitigate risk on project requiring a given level of development effort.</li> </ul>
<b>Medium</b>	<ul style="list-style-type: none"> <li>Moderate change to business rules.</li> <li>Major enhancement or moderate change of mission critical system.</li> <li>Medium complexity business process(es).</li> <li>Requires moderate job training</li> </ul>	<ul style="list-style-type: none"> <li>Under \$5 million but over agency delegated authority.</li> </ul>	<ul style="list-style-type: none"> <li>New in agency with 3rd party expertise and knowledge transfer.</li> <li>One of the technologies listed above is new for agency development staff.</li> </ul>	<ul style="list-style-type: none"> <li>Executive sponsor knowledgeable but not actively engaged.</li> <li>System integrator under contract with agency technical participation.</li> <li>Agency and/or vendor record indicates good level of success but without the structure for repeatability.</li> </ul>

<sup>1</sup> The acquisition of new frequencies will require SIEC oversight, however should not be considered as a risk in determining risk for the Information Services Board.

Categories				
Levels	Functional Impact on Business Processes or Rules	Development Effort & Resources	Technology	Capability & Management
<b>Low</b>	<ul style="list-style-type: none"> <li>• Insignificant or no change to business rules.</li> <li>• Low complexity business process(es).</li> <li>• Some job training could be required.</li> </ul>	<ul style="list-style-type: none"> <li>• Within agency delegated authority.</li> </ul>	<ul style="list-style-type: none"> <li>• Standard, proven agency technology.</li> </ul>	<ul style="list-style-type: none"> <li>• Strong executive sponsorship.</li> <li>• Agency and vendor have strong ability to mitigate risk on a development project.</li> <li>• Project staff uses documented and repeatable processes for tracking status, problems, and change.</li> </ul>

### Project Approval and Oversight Matrix

The level of approval and oversight required on a given project is determined through an assessment of project risk and severity:

<b>High Severity</b>	<b>Level 2</b>	<b>Level 2</b>	<b>Level 3</b>
<b>Medium Severity</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 2</b>
<b>Low Severity</b>	<b>Level 1</b>	<b>Level 1</b>	<b>Level 1</b>
	<b>Low Risk</b>	<b>Medium Risk</b>	<b>High Risk</b>

Level 2 projects may require ISB approval and oversight.

**Oversight Definition**

**Level 1:** Investments at this level are overseen by agency management and staff according to the IT policies, procedures, and practices of that agency, consistent with ISB IT investment policies and standards. It is at the agency's discretion whether to invite the DIS MOST consultant to key meetings, whether to provide the consultant with written reports, and whether to include a Level 1 project in the agency's portfolio.

NOTE: Level 1 investments subject to section 902 of the state's biennial budget are treated as Level 3s.

**Level 2:** DIS oversight of investments at this level is performed by DIS MOST staff, as appropriate, in consultation with the SIEC Technical/Frequency Management Work Group. The specific activities required of an agency and the extent of DIS MOST staff involvement under Level 2 oversight are determined collaboratively between the two parties. These typically depend on several factors, including, but not limited to: the experience of the agency with similar investments; the effect of legislative or public opinion in the event of negative media coverage; the interest of specific ISB members (e.g., effect on an ISB legislative member's district); and essentially, the criteria contained in the severity/risk matrix.

For all Level 2 investments, the agency shall develop the appropriate type and quality of project management documentation and materials commensurate with the project's severity and risk. Should the agency and DIS MOST staff determine that the project requires DIS oversight, at a minimum, the agency shall provide copies of the project status reports, and key project documents and materials to its MOST consultant and invite the consultant to attend all steering committee and key project status meetings.

NOTE: Level 2 investments subject to section 902 of the state's biennial budget are treated as Level 3s.

**Level 3:** Investments at this level are subject to full ISB oversight, which includes DIS MOST staff written reports to the ISB, periodic status reports to the ISB by the agency director and staff, and submission of other reports as directed by the ISB.

At this level, the agency shall provide copies of key project documents, including the feasibility study, project external quality assurance reports, project management plans, risk management plans, change management plans, and closeout and evaluation reports to its MOST consultant as staff to the Board. The consultant participates in all steering committee and project status meetings.

**Oversight Levels**

Having determined the risk and severity associated with a proposed project, it will be assigned the appropriate level of approval and oversight with the following general requirements.

	<b>Justification &amp; Approval Decision</b>	<b>Feasibility Study and Project Management Approach/Execution</b>	<b>Oversight</b>
<b>Level 3</b>	<ul style="list-style-type: none"> <li>• Agency director approval.</li> <li>• DIS executive review and comment.</li> <li>• ISB approval.</li> </ul>	<ul style="list-style-type: none"> <li>• Agency presents feasibility study to ISB.</li> <li>• Prototype required at discretion of ISB.</li> <li>• Private sector participation encouraged or required.</li> </ul>	<ul style="list-style-type: none"> <li>• ISB oversight required.</li> <li>• External QA required.</li> <li>• ISB audit as necessary.</li> <li>• Other ISB discretionary actions as needed.</li> </ul>
<b>Level 2</b>	<ul style="list-style-type: none"> <li>• Agency executive approval.</li> <li>• DIS Director review and approval.</li> </ul>	<ul style="list-style-type: none"> <li>• Agency executive approval.</li> <li>• DIS consultation.</li> </ul>	<ul style="list-style-type: none"> <li>• Internal or external QA at agency discretion.</li> <li>• DIS and agency determine oversight required</li> <li>• ISB oversight optional.</li> </ul>
<b>Level 1</b>	<ul style="list-style-type: none"> <li>• Agency executive approval with option of DIS consultation.</li> </ul>	<ul style="list-style-type: none"> <li>• Agency-defined methods.</li> </ul>	<ul style="list-style-type: none"> <li>• Internal QA at agency determination.</li> </ul>

**Requirements at Different Levels of Oversight**

	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>
<b>Feasibility Study</b>	Agency discretion	Recommended	Required
<b>Approval Level</b>	Agency Internal	DIS Director (may recommend full ISB oversight)	ISB
<b>Investment Plan</b>	Recommended	Required	Required
<b>Quality Assurance</b>	Agency discretion	Internal or external (agency discretion)	External required
<b>In Portfolio</b>	Agency discretion	Required	Required
<b>Oversight</b>	Agency discretion	Level of MOSTD staff involvement dependent on project and consultation with agency	ISB
<b>Project Reporting and Status</b>	Agency discretion	Agency provides copies of key written reports to MOSTD staff	MOSTD staff provides written reports to ISB. Agency sponsor and staff provide periodic status reports to ISB
<b>Key Meeting Participation by MOSTD Staff</b>	Agency discretion	MOSTD staff invited to steering committee and project status meetings	MOSTD staff participates in steering committee and key project status meetings